

REMARKS

The fee for a three-month extension of time and any other fees that may be due in connection with the filing of this paper or with this application should be charged to Deposit Account No. 50-0911. If a Petition for extension of time is needed, this paper is to be considered such Petition.

Claims 1-17, 19-25, 27-35, 62-70, 72-78 and 82-86 are pending. Claim 18 is cancelled without prejudice or disclaimer. Claims 69, 70 and 72-77 are withdrawn but are retained for possible joinder if claim 1 is deemed allowable.

Claims 1, 2, 12, 28-30, 62 and 83 are amended. Claims 1 and 30 are amended to delete an optionally substituted C₁-C₄ heteroalkyl and CO₂R^A as selections in the definition of substituent R¹, to delete OR^A and an optionally substituted C₁-C₄ heteroalkyl as selections in the definition of substituent R², to delete OR^A as a selection in the definition of substituent R⁵, and to delete optionally substituted aryl as a selection in the definition of R⁹. Claim 1 also is amended to delete the option that R^{6a} and R^{7a} together form a carbonyl. Claims 1, 30, 62 and 83 are amended to delete the recitation "ester or amide." Claims 2, 12, 28 and 29 are amended to comport with amended claim 1. No new matter is added.

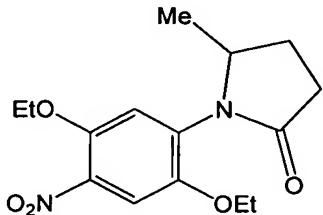
I. PETITION DECISION

Applicant acknowledges the Petition Decision, mailed May 18, 2011, granting Applicant's request that the finality of the Office Action, mailed April 15, 2011 be withdrawn. The Action was vacated to the extent that it was made "final" and the Office Action is now considered to be a non-final Office Action.

II. THE REJECTION OF CLAIMS UNDER 35 U.S.C. §102(b)

1. Sues *et al.*

Claims 1 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sues *et al.* (GB 1177545), because Sues *et al.* discloses the compound RN 23196-17-0 CA PLUS:



Reconsideration of the grounds for the rejection respectfully is requested in view of the amendments herein and the following remarks.

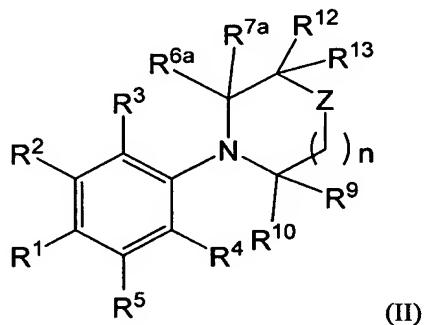
RELEVANT LAW

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Spada*, 15 USPQ2d 1655 (Fed. Cir., 1990), *In re Bond*, 15 USPQ 1566 (Fed. Cir. 1990), *Soundscriber Corp. v. U.S.*, 360 F.2d 954, 148 USPQ 298, 301, adopted 149 USPQ 640 (Ct. Cl.) 1966. See, also, *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir.), *cert. denied*, 110 S.Ct. 154 (1989).

"[A]ll limitations in the claims must be found in the reference, since the claims measure the invention." *In re Lang*, 644 F.2d 856, 862, 209 USPQ 288, 293 (CCPA 1981). It is incumbent on Examiner to identify wherein each and every facet of the claimed invention is disclosed in the reference. *Lindemann Maschinen-fabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). Further, the reference must describe the invention as claimed sufficiently to have placed a person of ordinary skill in the art in possession of the invention. *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981).

THE CLAIMS

Claim 1 recites a compound of Formula II:



(II)

where:

R¹ is selected from among SR^A, NO₂, CN, an optionally substituted C₁-C₄ haloalkyl, COR^A, CONR^AR^B, SOR^A, and SO₂R^A;

R² is selected from among F, Cl, Br, I, SR^A, NO₂, CN, an optionally substituted C₁-C₄ haloalkyl, an optionally substituted C₁-C₄ heteroalkyl, COR^A, CO₂R^A, CONR^AR^B, SOR^A, SO₂R^A, and SO₂NR^AR^B, NHCOR^A, and NHCONR^AR^B;

R³ and R⁴ each independently is selected from among hydrogen, F, Cl, OR^A, an optionally substituted C₁-C₄ alkyl, and an optionally substituted C₁-C₄ haloalkyl; provided that if R¹ is NO₂ and R³ is F, then Z is not O;

R⁵ is selected from among hydrogen, F, Cl and an optionally substituted C₁-C₄ haloalkyl;

R^{6a} and R^{7a} each independently is selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, and an optionally substituted C₂-C₆ alkenyl;

R⁹ is selected from an optionally substituted C₁-C₈ alkyl, an optionally substituted C₂-C₈ alkenyl, an optionally substituted C₁-C₈ haloalkyl, an optionally substituted C₂-C₈ haloalkenyl, C₁-C₈ heteroalkyl, an optionally substituted C₂-C₈ heteroalkenyl, an optionally substituted C₂-C₈ alkynyl, an optionally substituted C₂-C₈ haloalkynyl, an optionally substituted C₂-C₈ heteroalkynyl, an optionally substituted heteroaryl, CH(R^D)OR^A, CH(R^D)NR^AR^B, COR^A, CO₂R^A, and (CH₂)_mR^C;

R¹⁰ is selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, and an optionally substituted C₂-C₆ alkenyl;

R¹² and R¹³ each independently is selected from among hydrogen, F, Cl, OR^A, NR^AR^B, SR^A, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, an optionally substituted C₂-C₆ alkenyl, and (CH₂)_mR^C;

R^A and R^B each independently is selected from among hydrogen, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

R^C is selected from among an optionally substituted aryl and an optionally substituted heteroaryl that is optionally substituted with a substituent selected from among F, Cl, Br, I, CN, OR^A, NO₂, NR^AR^B, SR^A, SOR^A, SO₂R^A, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

R^D is selected from among hydrogen, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

Z is selected from among O, S, CR^AR^B, and NR^D;

n is 0, 1, or 2; and

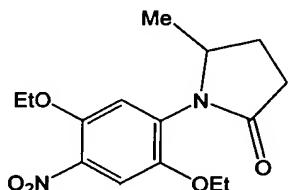
m is 1 or 2;

or a pharmaceutically acceptable salt thereof.

Claim 18 depends from claim 1 and includes every limitation thereof.

DISCLOSURE OF THE CITED ART

Sues *et al.* describes a one-component diazotype material suitable for the preparation of photo-prints by the semi-wet process. Sues *et al.* describes a compound having the structure:



The cited compound of Sues *et al.* includes a C=O moiety on the carbon atom adjacent to the ring nitrogen atom of the pendant ring. Sues *et al.* does not describe any compound that includes on one carbon atom adjacent to the ring nitrogen an optionally substituted C₁-C₈ alkyl, an optionally substituted C₂-C₈ alkenyl, an optionally substituted C₁-C₈ haloalkyl, an optionally substituted C₂-C₈ haloalkenyl, C₁-C₈ heteroalkyl, an optionally substituted C₂-C₈ heteroalkenyl, an optionally substituted C₂-C₈ alkynyl, an optionally substituted C₂-C₈ haloalkynyl, an optionally substituted C₂-C₈ heteroalkynyl, an optionally substituted C₂-C₈ heteroalkyl, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, and an optionally substituted C₂-C₆ alkenyl; and on the other carbon atom adjacent to the ring nitrogen atom a substituent selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl and an optionally substituted C₂-C₆ alkenyl.

ANALYSIS

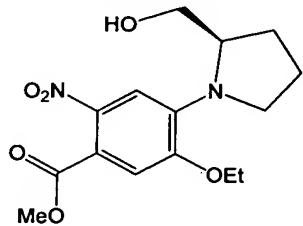
The cited compound of Sues *et al.* is not within the scope of claim 1 or 18 or any pending claim. The cited compound of Sues *et al.* has a pendent heterocyclic ring having a nitrogen atom that includes a C=O moiety on one of the carbon atoms adjacent to the ring N atom. The compounds of instant formula II include a pendent heterocyclic ring containing a N atom attached through the nitrogen atom. One of the carbon atoms adjacent to the ring N atom is substituted with R^{6a} and R^{7a} each of which independently is selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl and an optionally substituted C₂-C₆ alkenyl. The other carbon atom adjacent to the ring N atom is substituted with R⁹ and R¹⁰, where R⁹ is selected from an optionally substituted C₁-C₈ alkyl, an optionally substituted C₂-C₈ alkenyl, an optionally substituted C₁-C₈ haloalkyl, an optionally substituted C₂-C₈ haloalkenyl, C₁-C₈ heteroalkyl, an optionally substituted C₂-C₈ heteroalkenyl, an optionally substituted C₂-C₈ alkynyl, an optionally substituted C₂-C₈ haloalkynyl, an optionally substituted C₂-C₈ heteroalkynyl, an optionally substituted heteroaryl, CH(R^D)OR^A, CH(R^D)NR^AR^B, COR^A, CO₂R^A, and (CH₂)_mR^C; and R¹⁰ is selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, and an optionally substituted C₂-C₆ alkenyl. As instantly claimed, none of R^{6a} and R^{7a} nor R⁹ and R¹⁰ taken together can form a carbonyl group.

Sues *et al.* does not describe any compound that includes, on the carbon atoms adjacent to the ring N atom, substituents as instantly claimed. Sues *et al.* does not describe any compound that includes on one carbon atom adjacent to the ring nitrogen an optionally substituted C₁-C₈ alkyl, an optionally substituted C₂-C₈ alkenyl, an optionally substituted C₁-C₈ haloalkyl, an optionally substituted C₂-C₈ haloalkenyl, C₁-C₈ heteroalkyl, an optionally substituted C₂-C₈ heteroalkenyl, an optionally substituted C₂-C₈ alkynyl, an optionally substituted C₂-C₈ haloalkynyl, an optionally substituted C₂-C₈ heteroalkynyl, an optionally substituted heteroaryl, CH(R^D)OR^A, CH(R^D)NR^AR^B, COR^A, CO₂R^A, and (CH₂)_mR^C; and a substituent selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, and an optionally substituted C₂-C₆ alkenyl; and on the other carbon atom adjacent to the ring nitrogen atom a substituent selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an

optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl and an optionally substituted C₂-C₆ alkenyl. Thus, none of the compounds described in Sues *et al.* includes every element of claims 1 and 18. Therefore, Sues *et al.* does not anticipate either of claims 1 or 18 nor any pending claim.

2. Yamada *et al.*

Claims 1-4, 8-25, 27, 30, 34, 63-68, 78, 82, 83, 85 and 86 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada *et al.* (WO 2001083460), because Yamada *et al.* discloses the compound RN 372117-90-3 CA PLUS:



Reconsideration of the grounds for the rejection respectfully is requested in view of the amendments herein and the following remarks.

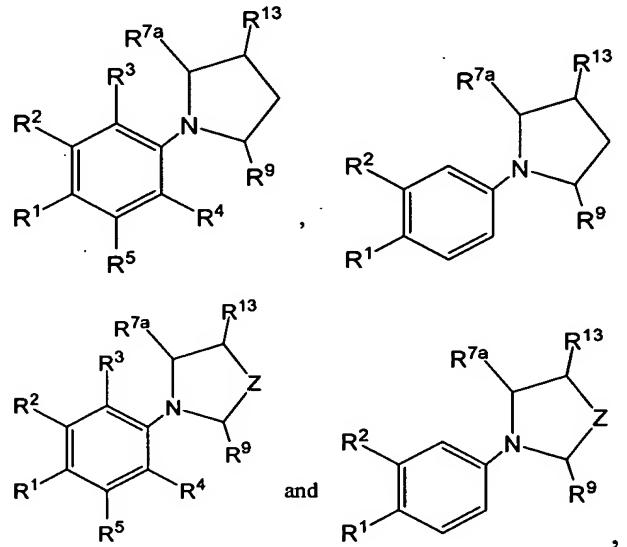
RELEVANT LAW

See related section above.

THE CLAIMS

Claim 1 is described above. Claims 2-4, 8-25, 27, 63-68, 78 and 82 ultimately depend from claim 1 and include every limitation thereof.

Claim 30 recites a compound that is selected from among:



where:

R¹ is selected from among SR^A, NO₂, CN, an optionally substituted C₁-C₄ haloalkyl, CONR^AR^B, SOR^A, and SO₂R^A;

R² is selected from F, Cl, Br, I, SR^A, NO₂, CN, a substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, COR^A, CO₂R^A, CONR^AR^B, SOR^A, SO₂R^A, and SO₂NR^AR^B, NHCOR^A, and NHCONR^AR^B;

R³ and R⁴ each independently is selected from among hydrogen, F, Cl, OR^A, an optionally substituted C₁-C₄ alkyl, and an optionally substituted C₁-C₄ haloalkyl; provided that if R¹ is NO₂ and R³ is F, then Z is not O;

R⁵ is selected from among hydrogen, F, Cl, an optionally substituted C₁-C₄ alkyl, and an optionally substituted C₁-C₄ haloalkyl;

R^{7a} is selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, and an optionally substituted C₂-C₆ alkenyl;

R⁹ is selected from an optionally substituted C₁-C₈ alkyl, an optionally substituted C₂-C₈ alkenyl, an optionally substituted C₁-C₈ haloalkyl, an optionally substituted C₂-C₈ haloalkenyl, C₁-C₈ heteroalkyl, an optionally substituted C₂-C₈ heteroalkenyl, an optionally substituted C₂-C₈ alkynyl, an optionally substituted C₂-C₈ haloalkynyl, an optionally substituted C₂-C₈ heteroalkynyl, an optionally substituted heteroaryl, CH(R^D)OR^A, CH(R^D)NR^AR^B, COR^A, CO₂R^A, and (CH₂)_mR^C;

R¹³ is selected from among hydrogen, F, Cl, OR^A, NR^AR^B, SR^A, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, an optionally substituted C₂-C₆ alkenyl, and (CH₂)_mR^C;

R^A and R^B each independently is selected from among hydrogen, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

R^C is selected from among an optionally substituted aryl and an optionally substituted heteroaryl that is optionally substituted with a substituent selected from among F, Cl, Br, I, CN, OR^A, NO₂, NR^AR^B, SR^A, SOR^A, SO₂R^A, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

R^D is selected from among hydrogen, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

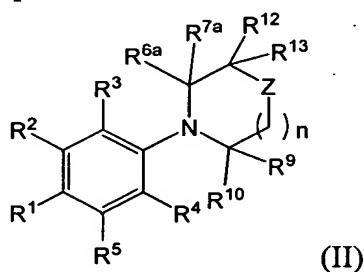
Z is selected from among O, S, CR^AR^B, and NR^D; and

m is 1 or 2;

or a pharmaceutically acceptable salt thereof.

Claim 34 depends from claim 30 and includes every limitation thereof.

Claim 83 recites a compound of Formula II:



where:

R¹ is COR^A, NO₂ or CN;

R² is selected from among hydrogen, F, Cl, Br, I, OR^A, SR^A, NO₂, CN, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, an optionally substituted C₁-C₄ heteroalkyl, COR^A, CO₂R^A, CONR^AR^B, SOR^A, SO₂R^A, and SO₂NR^AR^B, NHCOR^A, and NHCONR^AR^B;

R³, R⁴, and R⁵ each independently is selected from among hydrogen, F, Cl, OR^A, an optionally substituted C₁-C₄ alkyl, and an optionally substituted C₁-C₄ haloalkyl; provided that if R¹ is NO₂ and R³ is F, then Z is not O;

R^{6a} and R^{7a} each independently is selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, and an optionally substituted C₂-C₆ alkenyl; or R^{6a} and R^{7a} together form a carbonyl;

R⁹ is selected from among CH(R^D)OR^A, CH(R^D)NR^AR^B, COR^A and CO₂R^A;

R¹⁰ is selected from among hydrogen, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, and an optionally substituted C₂-C₆ alkenyl;

R¹² and R¹³ each independently is selected from among hydrogen, F, Cl, OR^A, NR^AR^B, SR^A, an optionally substituted C₁-C₆ alkyl, an optionally substituted C₁-C₆ haloalkyl, an optionally substituted C₁-C₆ heteroalkyl, an optionally substituted C₂-C₆ alkynyl, an optionally substituted C₂-C₆ alkenyl, and (CH₂)_mR^C;

R^A and R^B each independently is selected from among hydrogen, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

R^C is selected from among an optionally substituted aryl and an optionally substituted heteroaryl that is optionally substituted with a substituent selected from among F, Cl, Br, I, CN, OR^A, NO₂, NR^AR^B, SR^A, SOR^A, SO₂R^A, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

R^D is selected from among an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl;

Z is selected from among O, S, CR^AR^B, and NR^D;

n is 0, 1, or 2; and

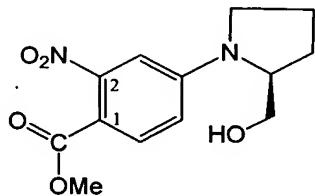
m is 1 or 2;

or a pharmaceutically acceptable salt thereof.

Claims 85 and 86 depend from claim 83 and include every limitation thereof.

DISCLOSURE OF THE CITED ART

Yamada *et al.* describes cyclic compounds that include a nitrogenous heterocyclic group. The compounds are purported to exhibit PDE V inhibitory activity and are described as useful as preventatives or therapeutic agents for diseases caused by dysfunctional signal transduction through cGMP. Among the compounds described in Yamada *et al.* is the compound (S)-methyl 4-(2-(hydroxymethyl)pyrrolidin-1-yl)-2-nitrobenzoate, which has the structure:



Yamada *et al.* does not describe any compound substituted at position 1 with a moiety selected from among SR^A, NO₂, CN, an optionally substituted C₁-C₄ haloalkyl, COR^A, CONR^AR^B, SOR^A, and SO₂R^A, where R^A and R^B each independently is selected from among hydrogen, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl.

ANALYSIS

The cited compound of Yamada *et al.* is not within the scope of any of claims 1-4, 8-25, 27, 30, 34, 63-68, 78, 82, 83, 85 and 86 or any pending claim.

Independent Claim 1

The compounds of formula II of instant claim 1 recite that R¹ is selected from among SR^A, NO₂, CN, an optionally substituted C₁-C₄ haloalkyl, COR^A, CONR^AR^B, SOR^A, and SO₂R^A. The compound of Yamada *et al.* has a -COOMe group at the corresponding position. Yamada *et al.* does not describe any compound substituted at position 1 with a

moiety selected from among SR^A , NO_2 , CN , an optionally substituted C_1 - C_4 haloalkyl, COR^A , $CONR^A R^B$, SOR^A , and $SO_2 R^A$, where R^A and R^B each independently is selected from among hydrogen, an optionally substituted C_1 - C_4 alkyl, an optionally substituted C_1 - C_4 haloalkyl, and an optionally substituted C_1 - C_4 heteroalkyl. Thus, none of the compounds described in Yamada *et al.* includes every element of claim 1. Claims 2-25, 27-29, 62-70, 72-78 and 82 ultimately depend from claim 1. Therefore, Sues *et al.* does not anticipate any of claims 1-25, 27-29, 62-70, 72-78 and 82.

Independent Claim 30

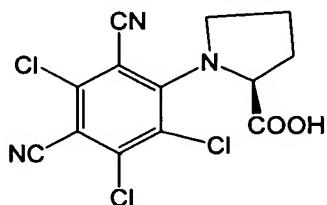
The compounds of formula II of instant claim 30 recite that R^1 is selected from among SR^A , NO_2 , CN , an optionally substituted C_1 - C_4 haloalkyl, $CONR^A R^B$, SOR^A , and $SO_2 R^A$. The compound of Yamada *et al.* has a $-COOMe$ group at the corresponding position. Yamada *et al.* does not describe any compound substituted at position 1 with a moiety selected from among SR^A , NO_2 , CN , an optionally substituted C_1 - C_4 haloalkyl, $CONR^A R^B$, SOR^A , and $SO_2 R^A$. Thus, none of the compounds described in Yamada *et al.* includes every element of claim 30. Claim 34 ultimately depends from claim 30. Therefore, Sues *et al.* does not anticipate claim 30 or 34.

Independent Claim 83

The compounds of formula II of instant claim 83 recite that R^1 is COR^A , NO_2 or CN . The compound of Yamada *et al.* has a $-COOMe$ group at the corresponding position. Yamada *et al.* does not describe any compound substituted at position 1 with a moiety selected from among COR^A , NO_2 and CN . Thus, none of the compounds described in Yamada *et al.* includes every element of claim 83. Claims 85 and 86 ultimately depend from claim 83. Therefore, Yamada *et al.* does not anticipate any of claims 83, 85 or 86 or any pending claim.

3. Sunjic *et al.*

Claims 1-5, 8-25, 27, 30, 34, 63-68, 78, 82, 83, 85 and 86 are rejected under 35 U.S.C. 102(b) as being anticipated by Sunjic *et al.* (US 6,437,167), because Sunjic *et al.* discloses the compound RN 253867-83-3 CA PLUS:



Reconsideration of the grounds for the rejection respectfully is requested in view of the amendments herein and the following remarks.

RELEVANT LAW

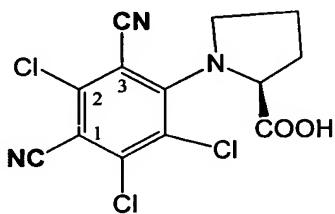
See related section above.

THE CLAIMS

The claims are discussed above.

DISCLOSURE OF THE CITED ART

Sunjic *et al.* describes chiral stationary phases for separation of enantiomers. All of the compounds described in Sunjic *et al.* are dicyanobenzenes, including the compound cited by the Examiner, which includes two CN moieties on the aromatic ring, one each at positions 1 and 3:



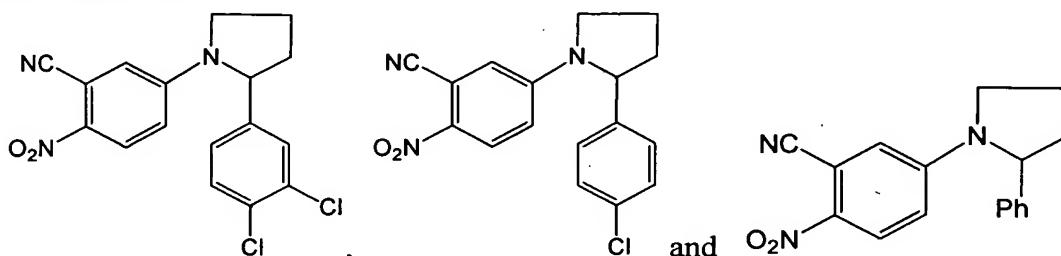
Sunjic *et al.* does not disclose any compound substituted at position 3 of the aromatic ring with a substituent selected from among hydrogen, F, Cl, OR^A, an optionally substituted C₁-C₄ alkyl and an optionally substituted C₁-C₄ haloalkyl.

ANALYSIS

The cited compound of Sunjic *et al.* is not within the scope of claims 1-5, 8-25, 27, 30, 34, 63-68, 78, 82, 83, 85 and 86 or any pending claim. The compounds of instant formula II include a substituent selected from among hydrogen, F, Cl, OR^A, an optionally substituted C₁-C₄ alkyl, and an optionally substituted C₁-C₄ haloalkyl at position 3 of the aromatic ring (even if the aromatic ring is rotated so that substituent R⁴ is located at position 3 of the aromatic ring). The cited compound of Sunjic *et al.* has a CN substituent at the corresponding position. Sunjic *et al.* does not disclose any compound substituted at position 3 of the aromatic ring with a substituent selected from among hydrogen, F, Cl, OR^A, an optionally substituted C₁-C₄ alkyl, and an optionally substituted C₁-C₄ haloalkyl. Thus, neither the cited compound of RN 253867-83-3 CAPLUS nor any other compound described in Sunjic *et al.* includes every element of claims 1-5, 8-25, 27, 30, 34, 63-68, 78, 82, 83, 85 and 86. Therefore, Sunjic *et al.* does not anticipate any of claims 1-5, 8-25, 27, 30, 34, 63-68, 78, 82, 83, 85 and 86 or any pending claim.

4. Elslager *et al.*

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Elslager *et al.* (Journal of Medicinal Chemistry 15(8): 827-836 (1972)), because Elslager *et al.* discloses the following compounds:



Reconsideration of the grounds for the rejection respectfully is requested in view of the amendments herein and the following remarks.

RELEVANT LAW

See related section above.

THE CLAIMS

The claims are discussed above.

DISCLOSURE OF THE CITED ART

Only an Abstract of this reference was provided by the Office. A copy of the reference is provided in the supplemental Information Disclosure Statement that accompanies this response. Elslager *et al.* describes 2,4-diamino-6-(heterocyclic)quinazolines as a class of anti-metabolites that exhibit anti-malarial and anti-bacterial activity. Elslager *et al.* describes the chemistry for synthesis of the 2,4-diamino-6-(heterocyclic)quinazolines, which includes the formation of 5-(heterocyclic)-2-nitrobenzonitrile intermediates, such as the compounds cited by the Examiner, which are 2-nitro-5-(2-phenylpyrrolidin-1-yl)benzonitriles, where the phenyl group can be substituted with one or two chloro substituents.

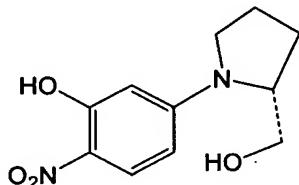
Elslager *et al.* does not disclose any compound with a carbon atom adjacent to the N atom of the pendent ring that is substituted with a substituent selected from among an optionally substituted C₁-C₈ alkyl, an optionally substituted C₂-C₈ alkenyl, an optionally substituted C₁-C₈ haloalkyl, an optionally substituted C₂-C₈ haloalkenyl, C₁-C₈ heteroalkyl, an optionally substituted C₂-C₈ heteroalkenyl, an optionally substituted C₂-C₈ alkynyl, an optionally substituted C₂-C₈ haloalkynyl, an optionally substituted C₂-C₈ heteroalkynyl, an optionally substituted heteroaryl, CH(R^D)OR^A, CH(R^D)NR^AR^B, COR^A, CO₂R^A, and (CH₂)_mR^C.

ANALYSIS

The cited compound of Elslager *et al.* is not within the scope of claim 1 or any pending claim. In the compounds of Elslager *et al.* cited by the Examiner, the pendent heterocycle is attached through the N atom, the one carbon adjacent to the ring N atom is substituted with two H atoms, and the other carbon atom adjacent to the ring N atom is substituted with a H atom and a phenyl, chlorophenyl or dichlorophenyl moiety. The cited compounds of Elslager *et al.* are not within the scope of the instant claims because none of R^{6a}, R^{7a}, R⁹ or R¹⁰ of formula II of the instant claims includes an optionally substituted aryl group as a selection. None of the compounds of Elslager *et al.* has a substituent selected from among an optionally substituted C₁-C₈ alkyl, an optionally substituted C₂-C₈ alkenyl, an optionally substituted C₁-C₈ haloalkyl, an optionally substituted C₂-C₈ haloalkenyl, C₁-C₈ heteroalkyl, an optionally substituted C₂-C₈ heteroalkenyl, an optionally substituted C₂-C₈ alkynyl, an optionally substituted C₂-C₈ haloalkynyl, an optionally substituted C₂-C₈ heteroalkynyl, an optionally substituted heteroaryl, CH(R^D)OR^A, CH(R^D)NR^AR^B, COR^A, CO₂R^A, and (CH₂)_mR^C on the carbon atom adjacent to the ring N atom. Thus, none of the cited compounds nor any compound described in Elslager *et al.* includes every element of claim 1. Therefore, Elslager *et al.* does not anticipate claim 1 nor any pending claim.

5. Jin *et al.*

Claims 1, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Jin *et al.* (Chemistry of Material 4(5): 963-965 (1992)), because Jin *et al.* discloses the compound RN 115416-47-2 CA PLUS:



Reconsideration of the grounds for the rejection respectfully is requested in view of the amendments herein and the following remarks.

RELEVANT LAW

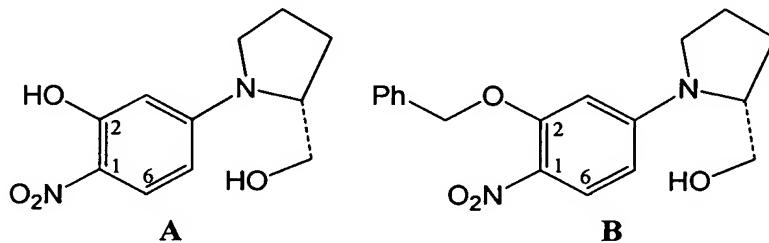
See related section above.

THE CLAIMS

The claims are discussed above.

DISCLOSURE OF THE CITED ART

Only an Abstract of this reference was provided by the Office. A copy of the reference is provided in the supplemental Information Disclosure Statement that accompanies this response. Jin *et al.* describes chromophore-functionalized polymeric nonlinear optical materials and their synthesis. The synthesis includes a reaction with the compound HNPP protected with a benzyl group. The HNPP compound has the structure shown as **A** below and the protected compound has the structure shown as **B** below:



Jin *et al.* does not disclose any compound substituted at position 2 of the aromatic ring with a substituent selected from among F, Cl, Br, I, SR^A, NO₂, CN, an optionally substituted C₁-C₄ haloalkyl, an optionally substituted C₁-C₄ heteroalkyl, COR^A, CO₂R^A, CONR^AR^B, SOR^A, SO₂R^A, and SO₂NR^AR^B, NHCOR^A, and NHCONR^AR^B.

ANALYSIS

The cited compound of Jin *et al.* is not within the scope of claims 1, 22 or 23 or any pending claim. The compounds of instant formula II of claim 1 do not include an -OH or -O-substituted moiety at position 2 (or position 6 via rotation). The compounds of formula II of claim 1 include a substituent at position 2 selected from among F, Cl, Br, I, SR^A, NO₂, CN, an optionally substituted C₁-C₄ haloalkyl, an optionally substituted C₁-C₄ heteroalkyl, COR^A, CO₂R^A, CONR^AR^B, SOR^A, SO₂R^A, and SO₂NR^AR^B, NHCOR^A, and NHCONR^AR^B, where R^A and R^B each independently is selected from among hydrogen, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl. If the ring is rotated so that R⁵ is in position 2, the substituents are selected from among hydrogen, F, Cl and an optionally substituted C₁-C₄ haloalkyl.

Jin *et al.* does not describe any compound substituted at position 2 of the aromatic ring with a substituent selected from among F, Cl, Br, I, SR^A, NO₂, CN, an optionally substituted C₁-C₄ haloalkyl, an optionally substituted C₁-C₄ heteroalkyl, COR^A, CO₂R^A, CONR^AR^B, SOR^A, SO₂R^A, and SO₂NR^AR^B, NHCOR^A, and NHCONR^AR^B, where R^A and R^B each independently is selected from among hydrogen, an optionally substituted C₁-C₄ alkyl, an optionally substituted C₁-C₄ haloalkyl, and an optionally substituted C₁-C₄ heteroalkyl.

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Election & Preliminary Amendment

Jin *et al.* does not describe any compound substituted at position 2 of the aromatic ring with a substituent selected from among hydrogen, F, Cl and an optionally substituted C₁-C₄ haloalkyl. Thus, neither the cited compound of RN 115416-47-2 CAPLUS nor any compound described in Jin *et al.* includes every element of claims 1, 22 and 23. Therefore, Sokolov *et al.* does not anticipate any of claims 1, 22 or 23 or any pending claim.

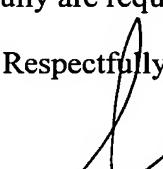
III. THE REJECTION OF CLAIMS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 1-25, 27-35, 62-68, 78, 82-86 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter because the recitation "pharmaceutically acceptable ester or amide thereof" allegedly is vague and indefinite. The Examiner states that the recitation "pharmaceutically acceptable ester or amide thereof" implies more than what is positively defined by the recited variables. Without acquiescing to or addressing the propriety of the rejection, in order to advance prosecution, the claims are amended to delete the recitation "ester or amide" so that the claims recite "a pharmaceutically acceptable salt thereof." Thus, the amendment obviates the rejection.

* * *

In view of the amendment and remarks herein, entry of the amendment, reconsideration and allowance of the application respectfully are requested.

Respectfully submitted,


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Attorney Docket No. 33310.01112.US02 / 1112US

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